Research Archive of
Rising Scholars (preprint)
Where bright minds share their learnings

Mandate without means: An evaluation of Connecticut's short-lived RN staffing policy in nursing homes

Ayush Dave

KEYWORDS: nursing, staffing, policy, care, workforce

OVERVIEW: This study evaluates the effect of Connecticut's 2023 nurse staffing mandate, which provided a newly specified minimum for registered nurse (RN) care hours, on RN/aide hours (compliance) and fall rates (care quality indicator). This was tracked using panel data from 207 facilities and fixed-effects regression models. Results indicate a shift in workforce composition with minimal outcome improvement for long-term care residents following the underfunded staffing policy.

Summary

Staffing levels in U.S. nursing homes often affect resident outcomes. Despite this, federal requirements remain low, which leaves states to set their own standards. In 2023, Connecticut put in place a rule requiring 0.84 hours of the required 3.0 hours of total direct care per resident-day to come specifically from Registered Nurses (RNs) as opposed to lower-cost aides. The policy was repealed after 10 months due to cost and workforce concerns. We used panel data from 207 facilities (2021 to 2024) and employed fixed-effects regression models to analyze the policy's effect on registered nurse hours, aide hours, total direct-care hours, and resident fall rates. We hypothesized that the mandate would increase RN staffing and reduce falls with injury. However, RN hours actually decreased significantly by 0.084 hours per resident-day. Aide hours rose slightly but not significantly. Total direct-care hours and fall rates remained unchanged, and RN staffing did not have much effect on quality outcomes. Instead of improvements in care quality, we merely saw shifts in labor composition post-policy. The results show that sudden, underfunded staffing requirements do not always work. This is because there are not enough workers, and regulatory uncertainty in the policy limits compliance. Noticeable improvements in care quality require realistic timelines, stable funding, and workforce capacity, all features missing in the 2023 CT mandate.

Introduction

Nurse staffing levels in American nursing homes have been a focal point of policy debate for a while, with decades of research confirming the link between increased staffing, or more precisely Registered Nurses (RNs), and improved outcomes for residents (MACPAC). Those outcomes include but are not limited to reduced hospitalizations, reduced mortality, and reduced deficiency citations ("The Federal Nursing Home Staffing Standard"). A 2001 federal study recommended at least 4.1 nursing hours per resident-day, with significant RN input, to provide basic quality of care (MACPAC). Federal guidelines remain minimal, typically requiring only 0.3 hours per resident day (HPRD) for a 100-bed nursing facility, leaving meaningful regulation to individual states (MACPAC).

The COVID-19 pandemic put additional pressure on these staffing shortfalls (Denny-Brown et al.). With nursing homes suffering high death rates, workforce burnout, and regulatory scrutiny, both federal and state policymakers accelerated reform efforts (National Academies of Sciences et al.). In 2022, the National Academies released a comprehensive report on long-term care, and by 2024, the Centers for Medicare & Medicaid Services (CMS) began implementing the country's inaugural nationwide staffing standard (Centers for Medicare and Medicaid Services). Still, state-level action often moved faster, and nowhere was this more evident than in Connecticut.

In March 2023, Connecticut implemented one of the most extensive staffing requirements in the country, breaking down the previously mandated 3.0 hours of direct care per resident-day by requiring 0.84 hours to come from RNs (Phaneuf "Disputed Nursing Home Staffing Policy"). This was far above industry norms and the 0.55 RN hours proposed in CMS's first draft rule (Centers for Medicare and Medicaid Services). The minimum of 3.0 hours was phased in January of 2022, but the 2023 addition specified the ratio of the time to be supplied by nurses versus lower-paid nursing aides (Phaneuf "DSS Commissioner Withdraws Nursing Home Staffing Cost Estimate"). The policy was immediately criticized. The majority of facilities were already meeting the total hour mandate, but few had the RN personnel to meet the new requirement (Phaneuf "DSS Commissioner Withdraws Nursing Home Staffing Cost Estimate"). With a national shortage of registered nurses and tough job markets, many healthcare providers faced significant disruptions and turned to expensive agency staff, leading to serious financial challenges (Bowblis et al.).

The Connecticut Association of Health Care Facilities, which represents 165 nursing homes in Connecticut, filed a lawsuit in October 2023 against the Department of Public Health (Phaneuf "Disputed Nursing Home Staffing Policy"). The state repealed the requirement in January 2024, after facing legal challenges and a projected $55 million in Medicaid reimbursement expenses, despite the $1 million expense nonpartisan analysts initially predicted (Phaneuf "Disputed Nursing Home Staffing Policy"). This rapid policy cycle provides a rare opportunity to study how nursing homes respond to ambitious, short-lived mandates. Did facilities meaningfully change their staffing levels? Did they shift their skill mix by substituting aides for RNs? Most importantly, did the mandate lead to improved quality of care? We hypothesized that Connecticut's RN

staffing mandate would increase RN hours per resident-day and reduce adverse quality outcomes, specifically resident falls with injury.

This work used the 2023 experience from the state of Connecticut as a natural experiment. Using panel data from 207 skilled nursing facilities from 2021–2024 (before, during, and after the mandate) and an interrupted time series motivated, pre/post panel model with facility fixed effects, we analyzed changes in RN staffing, nurse aide hours, and total direct care hours per resident-day. The rate of fall among residents with injury was also examined. All other quality domains and financial information were not taken into account.

Our findings showed that the mandate did not work. RN staffing declined, likely due to substitution behavior. Total hours remained unchanged, and resident outcomes did not improve. Connecticut's experience highlighted the implementation challenges of rigid mandates introduced without corresponding workforce or financial support and offers key lessons for future staffing reforms.

Results

Overview of analytical approach:
We looked into how the 2023 RN staffing rules in Connecticut impacted staffing in nursing homes and resident outcomes. To do this, we conducted facility and year fixed-effects regressions on 207 nursing homes between 2021 and 2024. The policy was expected to increase registered nurse (RN) hours per resident-day (HPRD) and improve quality outcomes such as fall rates. Results of all models were summarized in Table 1, and temporal patterns are shown in Figures 1-4.

Model	Coefficient	Std_Error	P_Value
RN Hours (hours per resident-day, HPRD)	-0.084	0.015	4.79e-08
Aide Hours (hours per resident-day, HPRD)	0.027	0.028	0.338
Total Hours (hours per resident-day, HPRD)	-0.049	0.044	0.267
Falls (Direct)	0.099	0.18	0.585
Falls (Mediation)	0.175	0.19	0.367

Table 1. Estimated regression coefficients from the fixed-effects model
Coefficients represent the estimated effect of Connecticut's 2023 RN staffing mandate on nursing-home staffing levels and quality outcomes.

Note: RN = Registered Nurse; HPRD = hours per resident-day. "Falls (Direct)" models the policy's direct impact on resident falls with injury; "Falls (Mediation)" includes RN staffing as a covariate to test potential mediation. All models correspond to the specification shown below and include facility and year fixed effects, as well as controls for ownership, bed count, and health inspection ratings.

Changes in staffing following the policy:
The regression analysis revealed a statistically significant decline in RN staffing levels after the policy's enactment. Average RN hours per resident-day decreased by 0.084 ± 0.015 hours ($p < 0.001$) relative to pre-policy levels (Table 1). In contrast, nurse aide hours increased slightly by 0.027 ± 0.028 HPRD ($p = 0.338$), a change that was not statistically significant (Table 1). Total direct care hours declined slightly (–0.049 ± 0.044 HPRD; $p = 0.267$), a change that was not

statistically significant and appeared visually stable across years (Figure 2; Table 1). The 0.84 HPRD minimum threshold for RNs was not achieved (Figure 3). Aide staffing went over the mandated 2.16 HPRD by 2024 (Figure 4). These findings indicate that the policy coincided with a redistribution of staffing responsibilities rather than expansion of total care hours (Table 1; Figures 2-4).

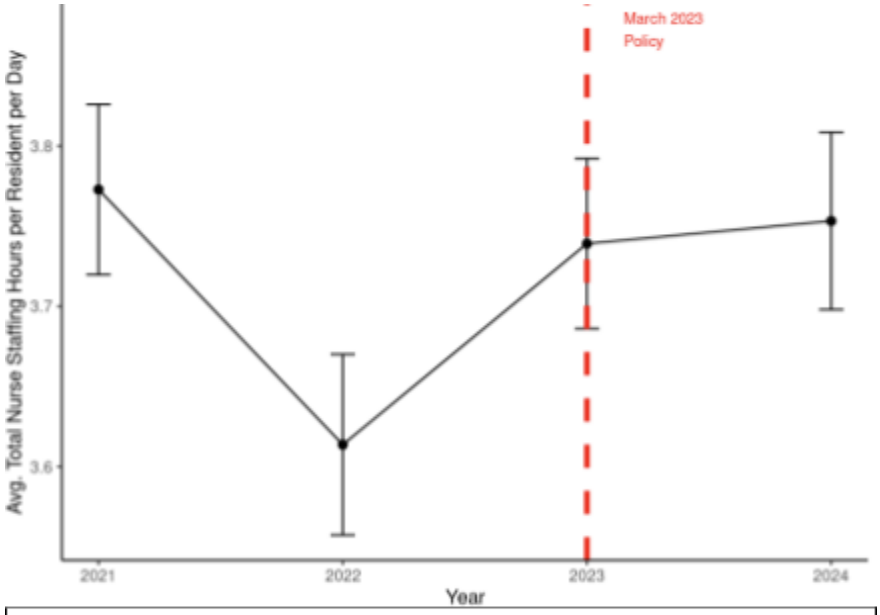

Figure 2. Average total nurse staffing hours per resident-day (HPRD) in Connecticut nursing homes (2021 – 2024)

This figure illustrates the average total nursing hours per resident per day across Connecticut nursing homes from 2021 to 2024. The red dashed vertical line marks the March 2023 implementation of the RN staffing mandate. Although a modest increase in staffing is visible between 2022 and 2023, overlapping confidence intervals indicate no statistically significant change in overall nurse staffing. These findings suggest that the policy did not produce a measurable rise in total staffing hours, likely due to resource constraints or staffing substitutions rather than additions.

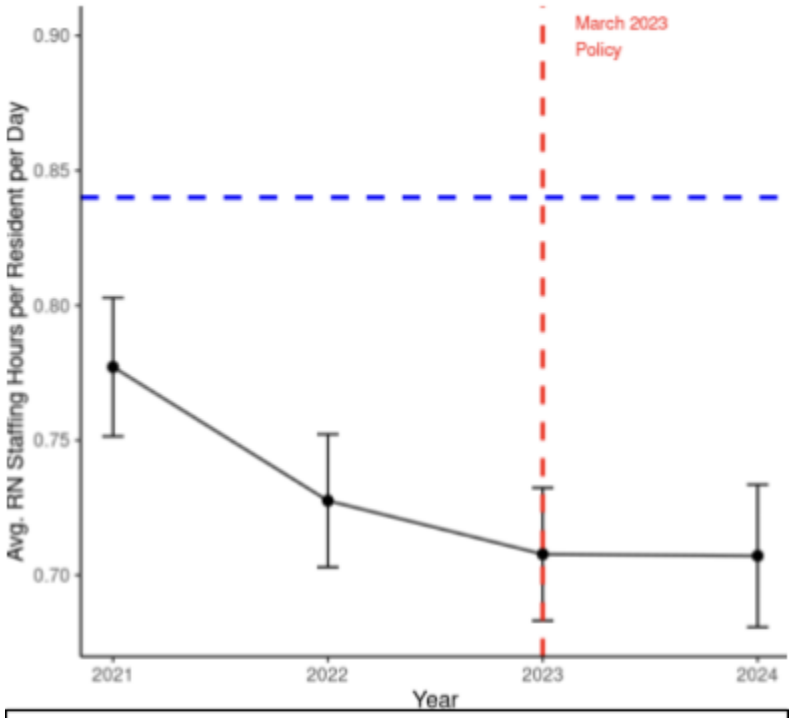

Figure 3. Average registered nurse (RN) staffing hours per resident-day (HPRD) in Connecticut nursing homes (2021 – 2024)

Average RN staffing hours per resident-day (HPRD) across 207 Connecticut nursing homes from 2021 through 2024. The red dashed vertical line marks the March 2023 implementation of the state's RN staffing mandate, while the horizontal blue dashed line indicates the required RN minimum of 0.84 hours per resident-day. RN staffing levels declined steadily from 2021 to 2023 and remained essentially unchanged through 2024, failing to reach the mandated threshold. This persistent shortfall, despite policy implementation, highlights the workforce and resource limitations that constrained facilities from meeting RN-specific requirements.

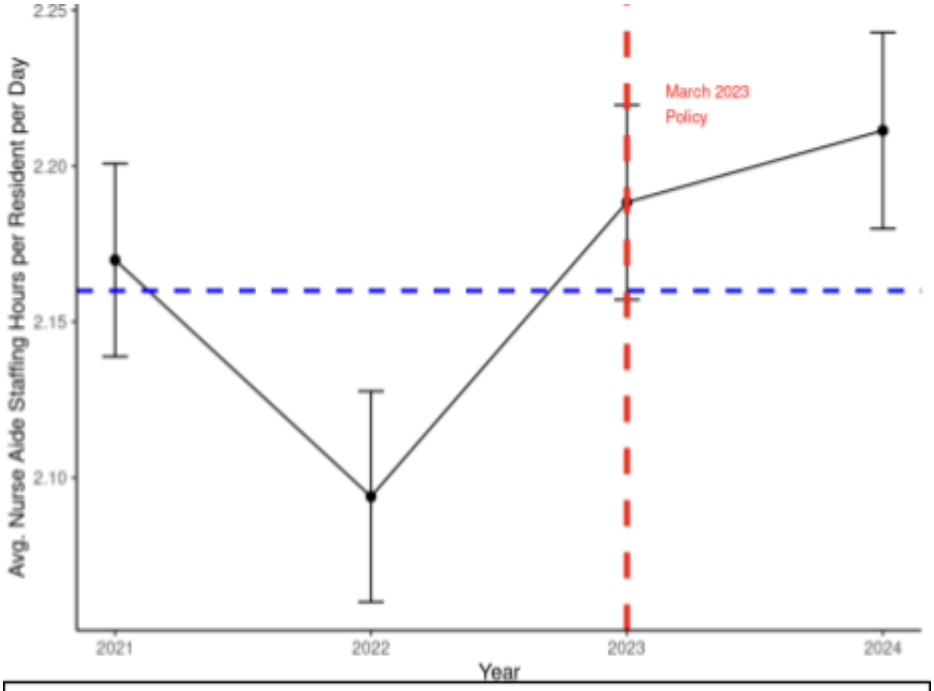

Figure 4. Average nurse aide staffing hours per resident-day (HPRD) in Connecticut nursing homes (2021 – 2024)

This graph illustrates the average nurse aide staffing hours per resident-day (HPRD) across 207 Connecticut nursing homes from 2021 through 2024. The red dashed vertical line marks the March 2023 implementation of the state staffing mandate, while the blue dashed horizontal line indicates the state-required minimum of 2.16 hours per resident-day. Following a dip in 2022, nurse aide staffing rose sharply after the policy's enactment and continued to climb in 2024, surpassing the minimum requirement. This upward trend suggests that facilities prioritized nurse aide staffing in response to the mandate, possibly due to lower training requirements and broader labor availability compared to RNs.

Effects on quality outcomes:
Resident fall rates showed no meaningful change following policy implementation. The post-policy coefficient for falls with injury was +0.099 ± 0.180 percentage points ($p = 0.585$), indicating no meaningful improvement or deterioration in fall-related injuries following the mandate (Table 1). Quarterly trends in fall rates showed similar variability and no sustained post-policy improvement (Figure 1). In a mediation specification including RN hours as a covariate, the post-policy coefficient remained non-significant (+0.175 ± 0.190; $p = 0.367$), and RN hours themselves were not significantly associated with fall rates (Table 1). Together, these results suggest that the absence of quality improvement is consistent with the observed decline in RN staffing (Table 1; Figure 1).

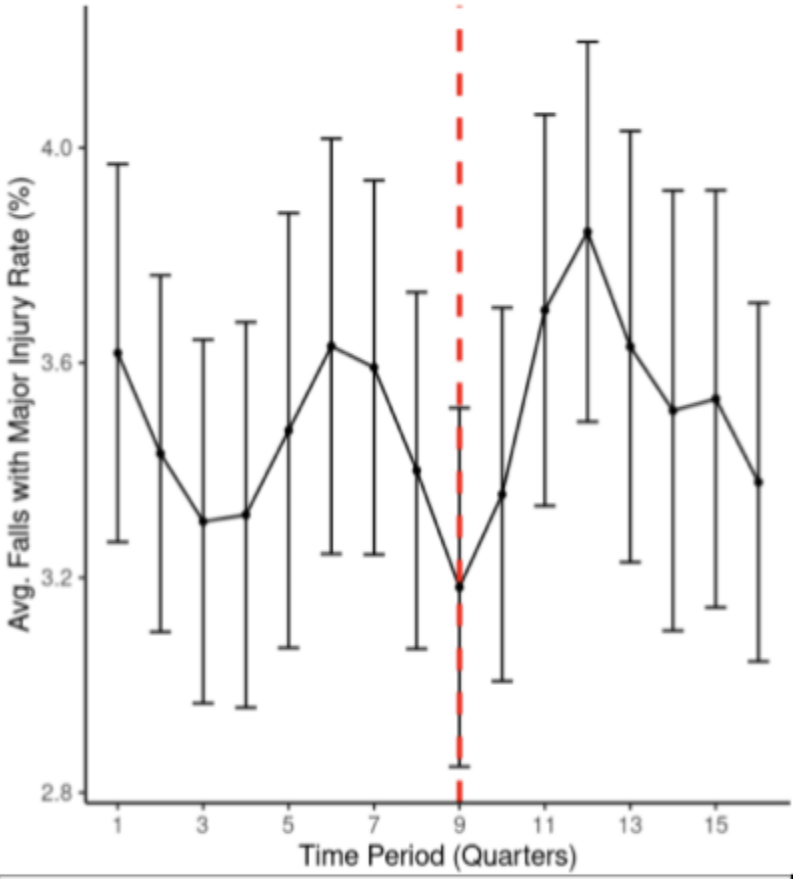

Figure 1. Average rate of falls with major injury among Connecticut nursing home residents (%)

This figure presents the average percentage of residents experiencing falls with major injury across Connecticut nursing homes, measured quarterly from 2021 through 2024 (N = 207 facilities). The vertical red dashed line indicates implementation of the 2023 RN staffing mandate (quarter 9). While the fall rate dips slightly at the time of the policy's introduction (quarter 9), the change is not sustained and falls remain variable across quarters. The wide confidence intervals indicate substantial uncertainty around each quarterly estimate, and overall, no statistically significant improvement in fall rates is observable post-mandate. This suggests the policy had limited short-term impact on this particular quality outcome.

Interpretation of key findings:

Taken together, the data suggested that Connecticut's brief RN staffing rule didn't improve overall care or cut down on fall incidents. The facilities shifted how they break down staff, adding more aides while cutting back on RN coverage. Since aides are typically paid less, this substitution showed an effort to comply partially with regulatory expectations in a more cost-

effective manner. The fact that fall rates stayed steady even with fewer RNs showed that quantifiable quality improvements require both adequate funding and a sustained effort rather than impulsively implemented rules (Table 1; Figures 1 & 3).

Discussion

The purpose of the 2023 registered nurse (RN) staffing mandate in Connecticut was to increase care quality by requiring a minimum of 0.84 hours of RN care per resident per day. The results of this study indicate that the policy, which was very briefly implemented, actually generated counterintuitive effects. Instead of increasing RN coverage, average RN hours decreased quite significantly by 0.084 ± 0.015 HPRD ($p < 0.001$), but aide hours nonsignificantly rose ($p = 0.338$). The total direct-care hours remained statistically the same ($p = 0.267$). This showed that the 2023 mandate shifted the skill mix of nurses rather than the staffing intensity itself (Table 1; Figures 2-4). Additionally, quality outcomes (fall rates) also failed to improve. Fall rates with injury showed no significant change after policy implementation ($p = 0.585$) and remained stable after accounting for RN staffing as a mediator ($p = 0.367$) (Table 1; Figure 1). These results demonstrated that the short-lived RN staffing requirement failed to achieve its intended goal of strengthening nursing home care, largely due to issues of compliance.

Several contextual factors probably accounted for these findings. RN staffing levels at most facilities were already below the required 0.84 HPRD; that made sudden compliance with the mandate inherently difficult (Phaneuf “DSS Commissioner Withdraws Nursing Home Staffing Cost Estimate”). Nursing labor shortages led to a limited and more expensive supply of qualified RNs (Office of Behavioral Health et al.). State financial support was simply not enough to offset new financial burdens that arose from this policy (due to incorrect cost estimates by the Public Health Department) (Phaneuf “Disputed Nursing Home Staffing Policy”). This could be why many nursing homes substituted RNs with lower-cost aides. On the other hand, the few facilities that may have exceeded the new RN threshold may have even reduced RN hours to the new standard, viewing it as a ceiling rather than a floor.

Uncertainty may have also been a factor impairing facility compliance (Phaneuf “Disputed Nursing Home Staffing Policy”). The RN requirement lasted for just 10 months (Phaneuf “Disputed Nursing Home Staffing Policy”). During that time, it encountered strong legal and political opposition (Phaneuf “Disputed Nursing Home Staffing Policy”). Even before its official repeal, legislators made public statements suggesting that the mandate may be softened, in turn creating regulatory uncertainty, which discouraged hiring (Phaneuf “Disputed Nursing Home Staffing Policy”). Overall, the uncertain environment may have caused nursing homes to take a "wait-and-see" approach, delaying expansive changes in staffing. This can account for the observed drop in RN staffing despite the policy’s enactment.

The lack of improvement in resident fall rates is consistent with the staffing patterns. Despite the use of falls as a quality indicator, temporary staffing changes, like the one being discussed, are unlikely to lead to noticeable clinical benefits. Quality improvement is hindered by a lack of stable funding and a push towards short-term compliance.
This study had some limitations that affected its conclusions. Firstly, the dataset spanned only from 2021 to 2024 and used annual facility-level averages. Annual data hindered our ability to capture any transient or seasonal responses, and having only four years of data restricted our access to delayed effects the policy may have had. Analyzing quarterly data in more detail might

show if registered nurse staffing increased at first and then dropped later, or if compliance varied from quarter to quarter. This is particularly helpful given that the policy was only in effect for 10 months (Phaneuf “Disputed Nursing Home Staffing Policy”). Second, our analysis lacked certain detailed facility-level covariates, such as chain affiliation, urbanicity, and resident acuity, that could explain any different responses. Third, the study did not use a difference-in-differences analysis with a comparison group of unaffected facilities. Instead, it relied on pre-post comparisons within the state of Connecticut, limiting our ability to attribute observed changes solely to the mandate. That means that certain external factors, like the volatility in the labor market (post-pandemic), regulatory reforms, or inflationary pressures, could have slightly influenced the staffing decisions. Lastly, the overall environment surrounding the policy may have distorted facility-level responses and behavior. It is worth noting that the Connecticut mandate was surrounded by much uncertainty; it was subject to litigation, political opposition, and ultimately repealed less than a year after implementation (Phaneuf “Disputed Nursing Home Staffing Policy”). This unstable context surrounding the policy may have also discouraged total compliance due to an expectation of the rule being reversed, which makes it difficult to interpret the effects as reflecting true intent or capacity.

Any future research should expand the scope of this study to assess comparative patterns across states and across certain levels of staffing mandates (RN specified, or generic) using a difference-in-differences framework. This would allow the isolation of most effects regarding compliance, care outcomes, etc, solely to the policy itself. Additionally, examining Connecticut’s earlier 2022 3.0 HPRD total-staffing requirement could help clarify whether incremental regulation affected RN hours or quality before the RN-specific policy. Given that the 3.0 HPRD stayed in effect much longer than the 0.84 HPRD RN mandate, we could truly analyze long-term compliance of nurse staffing policy in the state of Connecticut. Linking PBJ data with Department of Public Health inspection records, Medicaid reimbursement schedules, and waiver requests would allow researchers to distinguish between compliance, substitution, and financial distress. Lastly, regarding future research, more frequent observations (e.g., quarterly) and the inclusion of long-term outcomes, beyond fall rates, such as hospitalization and infection rates, would help assess whether staffing fluctuations actually yield lasting effects on care quality.

This work illustrates how even well-intentioned regulatory directives cannot take the place of workforce capacity and stable financing. Abruptly imposed staffing requirements without sufficient cost projections, particularly in a competitive labor environment, can unintentionally induce cost-reduction substitution instead of improved care. In the case of this specific policy, it was evident through the decrease in RN staffing. Policymakers should therefore align regulatory standards with feasible resource planning, phased implementation, and transparent communication to ensure that staffing mandates strengthen, rather than strain, the long-term-care system.

Materials and Methods

Data Sources & Panel Construction:
A panel dataset of Connecticut nursing homes from 2021 to 2024 was used in this study. That ensured we captured the years before, during, and after the state's 2023 staffing mandate. The primary data source was the Centers for Medicare & Medicaid Services (CMS) Payroll-Based Journal (PBJ) database, which was linked with quality measures from the Minimum Data Set (MDS) and facility characteristics from the Care Compare database. For all the facilities included in the dataset, staffing data was aggregated to the annual level in order to match the policy's duration and reduce short-term variation. The resulting panel included 780 facility-year observations from 207 different nursing homes (out of about 215 licensed homes in the state). Facilities missing data for a given year were retained in the panel, with missing values excluded listwise from regressions.

Staffing Measures:
Three main staffing variables were examined: Registered Nurse (RN) hours, nurse aide hours, and total direct-care hours. Nurse aide hours include Certified Nursing Assistants (CNAs) and medication technicians, while total hours include RNs, Licensed Practical Nurses (LPNs), and CNAs combined. Each of these variables is measured in hours per resident-day (HPRD), consistent with CMS standards. Connecticut's 2023 policy required 0.84 HPRD from RNs, 2.16 from aides, and 3.0 total HPRD (Phaneuf "Disputed Nursing Home Staffing Policy"). All values were analyzed using reported (unadjusted) HPRD from the Payroll-Based Journal (PBJ).

Outcome Measure: Falls With Major Injury
To assess quality of care, we used the percentage of long-stay residents who experienced falls with major injury, reported annually through the CMS Quality Measure. This measure reflects the proportion of residents who had at least one fall resulting in major injury during the year. Fall prevention and assessment often rely on RN oversight; that is why the indicator was considered sensitive to staffing patterns (Quigley et al.). For this analysis, lower fall percentages were interpreted as higher quality of care.

Study Design:
As previously stated, the staffing policy took effect in March of 2023 (required 3.0 total hours of direct care per resident-day and 0.84 hours from registered nurses) (Phaneuf "Disputed Nursing Home Staffing Policy"). The policy lasted only 10 months and was repealed in January of 2024 (Phaneuf "Disputed Nursing Home Staffing Policy"). We studied the effects of this short-lived policy using a pre-post panel regression design with facility fixed effects. This approach compares each nursing home to itself before and after the policy while accounting for factors that do not change over time, such as location or baseline staffing culture. The models included a linear time trend to capture broader post-pandemic recovery in staffing, and we added time-varying controls for ownership type, bed count, and the most recent health inspection score. This design was strong due to the clear policy timeline (well-documented start and end dates), the uniform exposure (all licensed nursing homes in Connecticut were subject to the same

mandate), and the controlling for time-varying characteristics (ownership status, bed count, and regulatory performance). Additionally, the policy was exogenously imposed by the state and not triggered by individual facility performance; this eliminates concerns that staffing changes caused the policy rather than vice versa.

Model Specification:
To quantify the effect of the staffing mandate on both staffing inputs and resident outcomes, we estimated the following fixed-effects panel regression model:

$$Y_{it} = \beta_0 + \beta_1(Policy)_t + \beta_2(Time)_t + \beta_3(Facility)_i + \beta_4(Ownership)_{it} + \beta_5(BedCount)_{it} + \beta_6(Health\ Survey)_{it} + \alpha_i + \varepsilon_{it}$$

where:

- Y_{it} is the outcome of interest for facility *i* in year *t* (e.g., RN hours, aide hours, total hours, or fall rate).
- $Policy_t$ is a binary indicator equal to 1 for post-policy years (2023–2024) and 0 for pre-policy years (2021–2022). The coefficient β_1 captures the average effect of the mandate.
- $Time_t$ is a continuous linear time trend (β_2), included to account for secular trends that could cause outcomes to change over time independently of the policy.
- $Facility_i$ (β_3) represents facility fixed effects, absorbing all time-invariant characteristics unique to each nursing home, including location, baseline ownership status, mission/culture, and managerial style.

Facility ownership can shift during the study period, such as through private equity acquisition or conversion from nonprofit to for-profit, which may influence staffing decisions independently of the policy. To avoid misattributing such changes to the mandate, we explicitly include ownership as a time-varying covariate. If ownership does not change over time, it is absorbed by the fixed effects term α_i.

The inclusion of a general linear time trend (β_2Time) is critical. Without it, any statewide trend, such as staffing recovering post-COVID, could be wrongly attributed to the policy. While the time trend is shared across all facilities, the fixed effects absorb baseline differences between them. As a result, the model compares each facility's actual outcome to the expected outcome based on its baseline characteristics and the broader trend. In other words, we ask: *Given this facility's history and what's happening statewide, did its staffing or outcomes change more or less than we'd expect in the years following the mandate?* This structure allows us to isolate the impact of the policy itself by controlling for both facility-specific baselines and statewide temporal shifts. All regressions were conducted using R statistical software.

Analysis:
We performed three primary sets of regression analyses to assess the policy's impact. First, to assess staffing outcomes, we estimated separate models for RN hours per resident-day, nurse aide hours, and total direct nursing hours. This analysis tests whether the policy increased staffing inputs as intended, or whether substitution occurred (e.g., RN reductions offset by aide

or LPN increases). Second, for quality outcomes, we ran a direct regression model to examine the relationship between the facility-level fall rate and the post-policy indicator, while adjusting for time trends and relevant covariates. The fall rate is a validated, RN-sensitive quality metric reported by CMS. Third, we estimated a mediation model to assess whether RN staffing mediates any relationship between the mandate and fall outcomes. We re-estimated the fall regression with RN hours included as an additional covariate.

References

1. MACPAC. “State Policy Levers to Address Nursing Facility Staffing Issues.” *Medicaid and CHIP Payment and Access Commission*, Mar. 2022. macpac.gov/wp-content/uploads/2022/03/State-Policy-Levers-to-Address-Nursing-Facility-Staffing-Issues.pdf
2. NursingHome411. “The Federal Nursing Home Staffing Standard.” *NursingHome411*, 22 Apr. 2024. nursinghome411.org/federal-staffing-standard/
3. Denny-Brown, Noelle, et al. “COVID-19 Intensifies Nursing Home Workforce Challenges.” *Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services*, 18 Oct. 2020. aspe.hhs.gov/reports/covid-19-intensifies-nursing-home-workforce-challenges
4. National Academies of Sciences, Engineering, and Medicine. *The National Imperative to Improve Nursing Home Quality: Honoring Our Commitment to Residents, Families, and Staff.* National Academies Press, 6 Apr. 2022. ncbi.nlm.nih.gov/books/NBK584660/
5. Centers for Medicare & Medicaid Services. “Medicare and Medicaid Programs: Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting (CMS-3442-P).” *CMS Fact Sheet*, 1 Sept. 2023. cms.gov/newsroom/fact-sheets/medicare-and-medicaid-programs-minimum-staffing-standards-long-term-care-facilities-and-medicaid
6. Phaneuf, Keith M. “Disputed Nursing Home Staffing Policy Will Cost CT Tens of Millions.” *CT Mirror*, 27 Feb. 2024. ctmirror.org/2024/02/27/ct-nursing-home-staffing-policy-cost/
7. Phaneuf, Keith M. “DSS Commissioner Withdraws Nursing Home Staffing Cost Estimate.” *CT Mirror*, 29 Feb. 2024. ctmirror.org/2024/02/29/ct-nursing-home-staffing-costs/
8. Bowblis, John R., et al. “Nursing Homes Increasingly Rely On Staffing Agencies for Direct Care Nursing.” *Health Affairs*, vol. 43, no. 3, 14 Feb. 2024, pp. 327–335. https://doi.org/10.1377/hlthaff.2023.01101
9. Office of Behavioral Health, Disability, and Aging Policy. “The Use of Contract Staff in Nursing Homes Remains High after the COVID-19 Pandemic Issue Brief.” *U.S. Department of Health and Human Services*, Jan. 2025. aspe.hhs.gov/sites/default/files/documents/0efd4ee9d0d0e9e67c5442141053d71c/contract-staff-nhs-high-after-covid.pdf
10. Quigley, Pat, et al. “Measuring Fall Program Outcomes.” *Online Journal of Issues in Nursing*, vol. 12, no. 2, May 2007. ojin.nursingworld.org/table-of-contents/volume-12-2007/number-2-may-2007/articles-on-previously-published-topics/measuring-fall-program-outcomes-/